

Int'l Appl. No. : PCT/JP2003/015128
Int'l Filing Date : November 27, 2003

AMENDMENTS TO THE CLAIMS

Please amend the Claims as follows. Insertions are shown underlined while deletions are ~~struck through~~.

1 (currently amended): A polishing pad used in chemical mechanical polishing and having a polishing region and a light-transmitting region, said polishing pad having at least one of the following characteristics: i) wherein the light transmittance ~~of~~in the light-transmitting region ~~ever~~throughout the wavelength range of 400 to 700 nm is 50% or more; ii) a thickness of the light-transmitting region is 0.5 to 4 mm, and light transmittance in the light-transmitting region throughout the wavelength range of 600 to 700 nm is 80% or more; or iii) the light-transmitting region is arranged between a central portion and a peripheral portion of the polishing pad, and a length (D) in a diametrical direction is 3 times or more longer than a length (L) in a circumferential direction.

2 (currently amended): The polishing pad according to claim 1, wherein ~~the~~a rate of change of the light transmittance ~~of~~in the light-transmitting region in wavelengths of 400 to 700 nm represented by the following equation is 50% or less:

the rate of change (%) = $\{(\text{maximum transmittance in 400 to 700 nm} - \text{minimum transmittance in 400 to 700 nm}) / \text{maximum transmittance in 400 to 700 nm} \} \times 100.$

3 (currently amended): The polishing pad according to claim 1-~~or 2~~, wherein the light transmittance ~~of~~in the light-transmitting region at a wavelength of 400 nm is 50% or more, and the transmittance ~~of~~in the light-transmitting region ~~ever~~throughout the wavelength range of 500 to 700 nm is 90% or more.

4 (currently amended): The polishing pad according to any one of claims 1-~~to 3~~, wherein ~~the~~a difference among ~~the~~respective light transmittances ~~of~~in the light-transmitting region in 500 to 700 nm is 5% or less.

5-6 (canceled)

7 (currently amended): The polishing pad according to claim 6~~1~~, wherein ~~the~~a shape of the light-transmitting region is rectangular.

8 (currently amended): The polishing pad according to claim 16-~~or 7~~, wherein ~~at the~~ length (D) in ~~the~~a diametrical direction is 1/4 to 1/2 relative to ~~the~~a diameter of a material to be polished.

9 (currently amended): The polishing pad according to any one of claims 16 to 8, wherein thea scatter of the thickness of the light-transmitting region is 100 μm or less.

10 (currently amended): The polishing pad according to any one of claims 1 to 9, wherein materials for forming the polishing region and the light-transmitting region are polyurethane resin.

11 (original): The polishing pad according to claim 10, wherein the polyurethane resin as the material for forming the polishing region and the polyurethane resin as the material for forming the light-transmitting region comprise the same kinds of organic isocyanate, polyol and chain extender.

12 (currently amended): The polishing pad according to any one of claims 1 to 11, wherein thea material for forming the light-transmitting region is non-foam.

13 (currently amended): The polishing pad according to any one of claims 1 to 12, which does not have an uneven structure for retaining and renewing an abrasive liquid on thea surface of the light-transmitting region in theon a polishing side.

14 (currently amended): The polishing pad according to any one of claims 1 to 13, wherein thea material for forming the polishing region is fine-cell foam.

15 (currently amended): The polishing pad according to any one of claims 1 to 14, wherein thea surface of the polishing region in theon a polishing side is provided with grooves.

16 (currently amended): The polishing pad according to claim 14 or 15, wherein thean average cell diameter of the fine-cell foam is 70 μm or less.

17 (currently amended): The polishing pad according to any one of claims 14 to 16, wherein thea specific gravity of the fine-cell foam is 0.5 to 1.0 g/cm³.

18 (currently amended): The polishing pad according to any one of claims 14 to 17, wherein thea hardness of the fine-cell foam is 45 to 65° in terms of Asker D hardness.

19 (currently amended): The polishing pad according to any one of claims 14 to 18, wherein thea compressibility of the fine-cell foam is 0.5 to 5.0%.

20 (currently amended): The polishing pad according to any one of claims 14 to 19, wherein thea compression recovery of the fine-cell foam is 50 to 100%.

21 (currently amended): The polishing pad according to any one of claims 14 to 20, wherein thea storage elastic modulus of the fine-cell foam at 40°C at 1 Hz is 200 MPa or more.

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22 (currently amended): A method of producing a semiconductor device, which comprises a step of polishing ~~the~~ surface of a semiconductor wafer with the polishing pad ~~described~~recited in any one of claims 1 to 21.